

5562

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: South Carolina

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 7 5562
Hydrographic }

LOCALITY

Port Royal Sound

Broad - Chechessee and Colleton Rivers

1934

CHIEF OF PARTY

Lt. I. E. Rittenburg

U. S. GOVERNMENT PRINTING OFFICE: 1923

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DEPARTMENT OF COMMERCE
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REG. NO. 5562

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 7

REGISTER NO. 5562

State South Carolina
General locality Broad River, South Carolina
Locality Broad, Chechessee, and Colleton Rivers
Scale 1:10,000 Date of survey Feb. - May, 19 34
Vessel Shore Party # 15
Chief of Party L. E. Rittenburg
Surveyed by M. D. Cooper, W. C. Huebner, J. A. McCormick
Protracted by A. O. Dority, J. C. Walsh
Soundings penciled by J. C. Walsh
Soundings in fathoms feet
Plane of reference Mean Low Water
Subdivision of wire dragged areas by _____
Inked by C. STANLEY LIGHTBOWN
Verified by _____
Instructions dated Nov. 2, 1933, 19
Remarks: Tide data in Volume 1 of Sounding Record.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET # 7, BROAD, CHEECHESSEE COLLETON RIVERS, SOUTH CAROLINA, H. & T. PROJECT 160

1. Instructions.

This survey was done in accordance with orders and instructions dated Nov. 2, 1933.

2 Area covered and junctions.

The area covered by this survey lies between Lat. 32-22 and Lat 32-19 in the Broad River, Cheechessee River from a junction with H- 5150 of 1931 to Lat. 32-20.7 Long 80-48.2, Colleton River from its entrance to Lat. 32-18.4 Long 80-51. It joins hydrographic sheet field # 6 on the north end of the Broad River, sheet field # 10 at the South end in the Broad River, sheet field # 11 on the west and joins with H-5150 at the south end of the Cheechessee River. All the junctions appear adequate and satisfactory.

3 Survey Methods and Control.

Control was based on the triangulation of C. A. Egner, 1931 and 1933, and that of K. G. Crosby 1934. Supplemental stations were located by at least 3 intersecting cuts obtained by a plane table and alidade. Hydrography was entirely controlled by three point fixes taken with a sextant.

4 Discrepancies.

None.

5 Channels.

Within the limits of this sheet 24 feet can easily be carried up the Broad river in the marked channel. There is another unmarked channel which runs closer to the East shore of Daw Island and along the west edge of a long narrow middle ground. This channel is deeper but more dangerous and is not recommended.

In the passage between Daw and Rose island there is a channel of 7 ft. This channel should be used by those with local knowledge or at low tide or with a rising tide as this passage is quite complicated and dangerous due to numerous shoals and bare sand banks. After entering the Cheechessee River there are 2 channels to reach the entrance to the Colleton River. The northern channel which follows the southwest shore of Rose Island is the easier although longer channel. The southern one is deeper but narrow and dangerous. 24 feet can be carried up the Cheechessee River to the entrance to the Colleton River. At the extreme south end of this sheet there are several 21 and 22 foot spots. As soon as this spot is passed the river deepens to considerably more than 30 feet. From the ~~main~~ entrance of the Colleton River to the western end of this sheet 22 feet can easily be carried but for the greater portion of this river there is considerably more water than this shown.

6 Dangers.

~~Spot~~
1 foot is correct.
In the Broad River there are two principal dangers. In Lat 32-19.4 Long. 80-43.1 is a shoal which runs in a northwesterly direction for about 3/4 mile with a least depth of 1 foot. This shoal also continues southwesterd and is further shown on sheet 18. In Lat. 32-19.7 Long. 80-44. along narrow middle ground bare in spots runs northwestward for about 2 miles or more. The eastern edge of this shoal is marked by black can buoy # 1. The passage between Rose and Daw Islands is dangerous and has numerous shoals and bare spots. These shoals and sand banks continue into the Cheechessee River to south of the entrance to the Colleton River. In the Cheechessee River there is a long narrow unmarked shoal extending from Lat. 32-18 Long. 80-45.9 ~~shoal~~ Northwestery for about 1 1/2 miles. This middle ground bares in places. The Colleton River is free from shoals for vessels of fairly deep draft .

7 Comparison with previous dangers.

Except for H- 4174 of 1920, the previous surveys are so old that no comparison of any value could be made. In general the channels and shoals agree wth the chart fairly well although they have changed somewhat. Where the soundings of this sheet overlap the soundings of H-5130 a very good agreement was obtained. This survey was compared with H-4174. The same shoals were found but changed somewhat in depth and position. There seems to have been quite a bit of scouring action here as the depths on this survey are generally deeper than those shown on H- 4174 in the shoal areas. Several shoaler soundings appear on H- 4174 than shown on this survey and also the reverse is true.

8 Tides.

A standard automatic tide gage was operated at Parris Island for the entire duration of this survey. In addition tide reducers were obtained from portable automatic gages installed at Archer Creek Beacon, In the Colleton River at signal Dec (Harry Grams Landing) and at Baileys Landing in the Okatee River, shown on sheet 11.

9 Statistics.

Statute miles of soundings.	539.8
Number of soundings taken	11,569
Number of positions taken	3,454

10 Landmarks for charts.

Charts 1240 and 571 were examined and all the landmarks in this area fit for charting are already charted and are all good.

I. E. Rittenburg, Lieut.,
Coast & Geodetic Survey,
Chief of Party.

Eddings Creek flows back of the Marine Corps rifle range. As they would not stop firing, it was impossible to make a survey of this creek.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO.5562

The following statistics will be submitted with the
cartographer's report on the sheet:

Number of positions on sheet	3454.
Number of positions checked	...116...
Number of positions revised	...1...
Number of soundings recorded	11569
Number of soundings revised	...143...
Number of signals erroneously plotted or transferred	...0...

Date: JAN. 30 - 1935
Feb. 21 - 1935

Verification by C. STANLEY LIGHTBOWN

Review by John G. Ladd

Time: 88 hrs. 93 1/2 hrs

Time: 25 hrs.

Report on H 5562-1934

Chief of party I.E. Rittenburg

Surveyed Feb - May - 1934

Surveyed by M.D. Cooper - W.C. Hoebner - J.A. McCormick

Soundings plotted by J.C. Walsh

Protracted by A.O. Dorrity - J.C. Walsh

Verified and inked by C. Stanley Lightbown

1. The records conform to the requirements of the General Instructions except. ✓

a. The ^{blue} day letters in records ~~were blue and on~~ ^{were shown on} smooth sheet ~~they were~~ ✓

b. Station "OUT" which was used on smooth sheet was not listed as required ✓

c. One error was found, due to tide reduction ✓

2. The usual depth curves were completely drawn ✓

3. The field plotting was completed as required except for the following: ✓

d. One half foot soundings were plotted as zero throughout the sheet, these were changed to give a more accurate delineation of low water line. ✓

b. The station name "OUT" was omitted from sheet ✓

c. The symbols for degrees and minutes were omitted from the sheet ✓

4. The office draftsman did not have to do over any part of the field draftsman's work except position 138 m day (lat. $32^{\circ} 21' 20''$ long. $80^{\circ} 46' 30''$) which was moved to conform to the original record, and boat sheet, the smooth plotter over ✓

had changed one signal in records evidently,
to prevent a change in direction of course, without
consulting boat sheet or adjacent soundings.

5. Junction with H 5561 was satisfactory.

Junction " H 5563 " " after making
correction to position 86 c day (5563) which was
plotted 40 meters off, this error was discovered when
over lap was made.

Junction with H 5564 (1934) was not made since
it had not been verified.

Junction with H 5519 (1933) was satisfactory - junction
made on H 5519.

6. This sheet has not been verified with air photo ^{see note below}
compilation to date as none are available ~~to get~~
at this time.

The smooth plotter used a very hard pencil in
plotting courses, resulting in indentations in the
paper, this made it very difficult to make
smooth numerals and depth curves.

761.20-

Sheet was compared with celluloids of air photo-compiled
~~station~~ ~~rephotographed~~ ~~from~~ ~~original~~ ~~photograph~~
No discrepancies could be found for signals which
appear outside shore line, except as noted. ^{Further}
the card file in O.R. for Topo (ARC) needed this information.

Respectfully submitted

C. Stanley Lightbown

The required reports and records received
except

Recoverable stations

Special Chart - U.S. Lighthouse Service

Field Examinations.

Mr. Ellis LGC

FE

January 7, 1934

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET: 5562

Locality Broad, Chechessee and Colleton Rivers, South Carolina

Chief of Party: I. E. Rittenburg in 1934

Plane of reference is mean low water reading

2.1 ft. on tide staff at Archers Creek

6.9 ft. below ~~B.M.~~ REFERENCE MARK ON PILE

0.5 ft. on tide staff at Parris Island

13.0 ft. below B.M. 1

1.6 ft. on tide staff at Victoria Bluff, Colleton River

10.5 ft. below B.M. 1

1.9 ft. on tide staff at Baileys Landing, Omatsee River

25.2 ft. below B.M. 1

Height of mean high water above plane of reference is 7.1 feet at
Archers Creek and Parris Island; 7.5 feet at Victoria Bluff;
8.1 feet at Baileys Landing.

Condition of records satisfactory except as noted below:

Paul Whitney.

Chief, Division of Tides and Currents.

From: L.S.S.

Survey No. H 5562

SOUTH CAROLINA

Date. Dec. 28. 1934.

Chart No. 1240

Diagram No. 1240-2

Names underlined in red approved Dec 31, 1934

*, Approved by the Division of Geographic Names, Department of Interior.

C, Not Approved by the Division of Geographic Names, Department of Interior. *Compared with Chart 1240 and Prog. Military Map*
 R, Referred to the Division of Geographic Names, Department of Interior. *R*

R, Referred to the Division of Geographic Names, Department of Interior. R

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
✓	<u>Broad River</u>	same			
	<u>Checkessee River</u>	✓ <u>Cheschessee River</u>			
✓	<u>Colleton River</u>	same			
✓	<u>Sawmill Cr.</u>	"			
✓	<u>Rose I.</u>	<u>Rose Is.</u>			
✓	<u>Spring Island</u>	same			
	<u>Daws Island</u> R	<u>Daw Island</u> <i>Daw Island may be put on leaving room for "S"</i>			
	<u>Copp I'dg.</u> <i>out H.A.</i>	<u>Copps Landing</u> <i>Prog. Mil. Map</i>			
		<u>Copp Landing</u> <i>Leave room for S in Copp's</i>			
	<u>Foot Pt.</u>	same			
✓	<u>Colleton Neck</u>	"			
	-----	✓ <u>Archers Cr.</u> <i>Letter GN4</i>			
		<u>Archer Cr.</u>			

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5562 (1934)

Broad, Chechessee and Colleton Rivers, Port Royal Sound, S. C.
Surveyed in February - May, 1934
Instructions dated November 2, 1933 (I.E. Rittenburg)

Hand Lead Soundings - 3 Point Fixes on Shore Signals.

Chief of Party - I. E. Rittenburg.
Surveyed by - M. D. Cooper, W. C. Huebner, J. A. McCormick.
Protracted and soundings plotted by - A. O. Dority, J. C. Walsh.
Verified and inked by - C. Stanley Lightbown.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual with the following exceptions:

- a. The chart for the location of aids to navigation for use of the Lighthouse Bureau has not been submitted.
- b. No approval note by the Chief of Party was included in the Descriptive Report probably due to the sheet being forwarded to Lieut. Rigg for addition of shoreline from air photo compilations.
- c. A number of signals which plot outside the highwater line do not show the topographic feature. It is considered that they are temporary signals on flats or bars which are bare except at high water.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

3. Sounding Line Crossings.

The cross lines as well as the parallel adjacent lines are in good agreement.

4. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn including most of the low water curve.

5. Junctions with Contemporary Surveys.

Satisfactory junctions are made with H-5561(1934) on the north, H-5563(1934) on the northwest and west and with H-5519(1933) on the northeast at Archers Creek, and with H-5130(1931) on the south at Chechessee River.

The junction with H-5564(1934) on the southeast at Broad River will be considered in the review of that survey.

6. Comparison with Prior Surveys.

a. H-679(1859) and H-831(1862-63)

These surveys cover the area of the present survey, the former along the Chechessee River and part of the Colleton River, and the latter in Broad River. A comparison between the above surveys and the present survey reveals numerous changes in depths and locations of shoals as well as some changes in shoreline. Because of the time elapsed between the earlier surveys and the present survey, the general character of the area and the nature of the bottom, it is unnecessary to consider in detail, from the standpoint of information to be carried forward, the various changes noted. The present survey within its limits should supersede the old surveys for charting purposes.

b. T-1195(1870-71)

This topographic survey which also contains some original hydrography, overlaps the present survey along the Colleton River. The agreement is satisfactory with the following exceptions:

(1) The spit with the 11 and 4 foot soundings on it at Lat. $32^{\circ}18.3'$, long. $80^{\circ}51.0'$ falls on the present survey in depths of at least 20 feet. In view of the elapsed time between the two surveys and the general nature of the area it is considered that the eastern end of the spit has deepened and is correctly represented by the present survey.

c. H-3898(1916)

This survey makes a small overlap with the present survey at the southern end of Chechessee River. The agreement is satisfactory.

d. H-4174(1921)

This survey which covers a portion of Broad River shows upon comparison with the present survey evidence of continued changes in depths and positions of the shoal areas. The area is considered to be a changeable one, as is also shown by comparison with still prior surveys previously discussed. A discussion of the changes noted is omitted since it would serve no useful navigable purpose. H-4174(1921) within its limits should be superseded by the present survey for charting purposes.

7. Comparison with Chart No. 571.

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and U. S. Engineer's blueprint No. 24685 (1931) at the mouth of Archer Creek. The latter is in agreement with the present survey.

b. Aids to Navigation.

Buoy C-1 is shown on the present survey at a position about 150 meters south and 100 meters east of its charted position. However in the position as shown on H-5562(1934) it adequately marks the feature intended.

8. Field Plotting.

The field plotting was satisfactory with the following exceptions:

- a. Position numbers in many cases were larger than necessary.
- b. The blue day letters of the sounding Volumes are shown in red on the smooth sheet.

9. Additional Field Work Recommended.

This survey is a well planned and well executed one and no additional field work is required.

10. Superseding Old Surveys.

Within the area covered the present survey supersedes the following surveys for charting purposes.

H-679 (1859)	In part.
H-831 (1862-3)	" "
T-1195(1870-71)	" "
H-3898(1916)	" "
H-4174(1921)	" "

11. Reviewed by John G. Ladd, March 1935.

Inspected by - A. L. Shalowitz.

K.T. Adams

K. T. Adams.

Asst. Chief, Division of Charts.

J.S. Borden
Chief, Section of Field Work.

Examined and approved:

L.O. Pollock
Chief, Division of Charts.

E. H. Hude
Chief, Division of H & T.

Applied to Cht. 571, Apr. 27, 1935

R. Reynolds

25 Jan 13, 1936
eug